

Socio-Economic Factors in Child Labor: Moderating Role of Education

M. Ali H. Chauhan¹
Noor-ul-Ain²

Abstract

The notion of child labor has disquieted the researcher. This paper highlights the impact of poverty, unemployment and social progress on child labor based on data from 30 countries to ascertain that incidence of child labor may be high with high level of poverty and unemployment along with low level of social progress and educational attainment. The results reveal that poverty has a positive while social progress and unemployment has negative relation with child labor. Moreover, education moderates the causal effects of social progress on child labor, while social progress also mediates the relationship between poverty and child labor.

Keywords: child labor, poverty, social progress, unemployment, education, economic development

1. Introduction

Child labor is an internationally recognized issue in current times and studies are being conducted to understand the core reasons for such a phenomenon to exist. The United Nations in its meetings highlighted and defined what is considered as child labor. "In all actions concerning children [...] the best interests of the child shall be a primary consideration" (United Nations 1989: art. 3). Children

¹ Mohammad Ali Haider Chauhan, School of Business and Economics, University of Management and Technology, Pakistan;

² Noor-ul-Ain, School of Business and Economics, University of Management and Technology, Pakistan.

Correspondence concerning this article should be addressed to Mohammad Ali Haider Chauhan, University of Management and Technology, Pakistan. E-mail: ali.chauhan@umt.edu.pk

are our present and our future, and they have the right “to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development” (United Nations 1989: art. 32). History depicts essentially that due to the worldwide changes during the 19th century in technology, industry, organizations and information access, policy makers around the world have started addressing this chronic problem of the world (Emerson & Souza, 2007).

Substantial dissimilarities exist between types of work which children have to do, as some kinds are morally disgraceful and more hazardous while the others are challenging and demanding (Mayer, 2004). Moreover, every kind of work which is done by children could not be categorized as child labor, distinction must be made (Khakshour et al., 2015). Child labor can be defined as the activities or work which deprives children of the childhood by inhibiting their dignity and potential. It is destructive towards their mental and physical development.

Governments and organizations are more aware now of the child labor issue than ever before. Unemployment, poverty and social stratification are ever present among the societies, no matter how free they become (Basu & Van, 1998). On one hand, social progress keeping cultural prestige and norms in view shall allow for a more progressive environment within and among the nations. While on the other hand, education plays an important part in the mix as it helps the nations create a more enabled work force along with a more exposed individual towards the social well-being (Basu, 2001; Weston, 2005).

Research leads us to deduce that internationally the issues of child labor are mostly the consequence of poverty (Baland & Robinson, 2000), unemployment (Muntaner et al., 2010), social progress (Sengenberger, 2002) and education (Beegle, Dehejia, & Gatti, 2009) which have been affecting the world for almost a century and still continues to do so. Organizations and nations support numerous studies being conducted and many text books (e.g. Weiner, 1991; Weston, 2005; Kielland & Tovo, 2006) are published to educate

youth about this concept as the issue is having global impact. Scholars highlight the lack of effort and work done in the field to research the affect and correlation among the poverty, social progress, unemployment and child labor situation of a society (Khakshour et al., 2015).

In this paper our intent is to analyze the impact of poverty, unemployment and socialization on the child labor, based on data taken from world organization databases from 30 countries to ascertain the relational impact of proposed variables on each other in different countries of world.

This paper will have a significant contribution to the literature. First, it will help to understand the core problems behind this chronic issue facing the future of this world in a daunting manner, with all the technological and social development. Second, it will make us able to have a composite look on important macroeconomic factors (social progress, unemployment, education and poverty) affecting the child labor. Third, it shall help to understand and apply some new statistical models and techniques (AMOS and PROCESS macro) to ascertain the moderating and mediating effect of variables on child labor, to reach on the consideration that what are the factors that are either increasing or decreasing the advent of child labor in the world and how? Lastly, this study has the potential to highlight approaches towards practical implications and helps the management to tackle this burning issue of today. Hoping that results of our attempt help in formation of new policy for the 21st century to tackle the menace of child labor in developing countries.

2. Theoretical Background

During recent years, an astounding proliferation of empirical work has been done on child labor (e.g. Weiner, 1991; Baland & Robinson, 2000; Kielland & Tovo, 2006; Muntaner et al., 2010; Weston, 2005). Scholars and researchers are exploring two pertinent questions as to ‘Why’ and ‘How’ children work. Concerned people are focusing on what kind of labor do these children have to perform and in which conditions. Literature states that a child is anyone under the age of 15 or anyone under the age of 18 respectively (Sengenberger, 2002). Although it is hard to get correct data about child

labor from countries as they are reluctant to share or other political and economic reasons, however, many statistical techniques have been developed to ascertain the damage done to the future of this world. As estimated 211 million children aged 5 to 14 and an additional 141 million children aged 15 to 17 are 'economically active', i.e. are involved in some form of work (ILO, 2004).

In an attempt for defining child labor, we refer to the leading source namely; IPEC (International Program on the Elimination of Child Labor) by International Labor Organization.

Child labor typically involves the work which is:

- a. Physically, mentally, morally or socially hazardous and injurious for children;
- b. Obstructs schooling of children through:
 - a. Divesting their opportunity for attending the school;
 - b. Frustrates and agreeing them for prematurely leaving school; or
 - c. Necessitating the need to syndicate school attendance with extremely heavy and long work activities (ILO, 2013)

The problem that we face with child labor is not a matter of regions or nation any more it is an international issue (Sengenberger, 2002). The poverty conditions of a society exacerbated by a poorly designed policy without understanding that what gives rise to child labor and how can we end it without affecting the childhood of a child (Basu & Tzannatos, 2003). Use of child labor increased in early nineteenth century, due to households affected by the two world wars and the demand for more income for sustenance, the explosion of population endangered the childhood concept of the human beings (Mayer, 2004). It was consistent and long standing issue in the developing Asian countries, it is estimated that around one to two hundred million children were working around the world – 95 percent of them in developing countries. Asia alone accounts for about 61 percent of the child labor estimates (Humphries, 2013; Lyons-Barrett, 2005).

The major antecedents of child labor are poverty, unemployment, tendency of social progress and lack of education (Muntaner

et al., 2010; Sengenberger, 2002). Poverty is transferred among generations in many instances. The issues related to it are nutrition, childcare, guidance, education and child labor, with aspirations for future and attitudes towards life (Harper et al., 2003). Families empowered through education especially adult education attain employment opportunities and impact the manner in which children benefit from the educational institutions and social environment in their early years leading to an escape route from the chains of poverty (Engle & Black, 2008). Education, work and social life are interlinked as it cannot be ascertained just by providing education to people shall be enable them to leave the trenches of poverty and hence be able to raise families without having to supply their children for child labor (Musterd & Andersson, 2006).

Social integrity of a society or country is not merely through GDP and its related measures, not it is solely through the spending packages given to families for education. The focus should be on children's nurturing and subjective well-being (Bradshaw, 2014). Hence, if the society does not hold the childhood of a child as sacred, it is not going to be saved from the demon of child labor (Caspi, 2000; Toossi, 2015). Education of the family play an important role in education of the child and thus ensures that children are free to develop their skill set in the field of education without the pressure to provide for the family, organizations and enterprises (Ray & Lancaster, 2004). It is also found in different cultures that poverty has a crucial role in the promotion of child labor (Edmonds, 2007).

Research shows that household poverty-driven-factors and household demography are most severe factors in the child labor dynamics in Lahore, Pakistan (Siddiqi, 2013). Researchers are working hard to identify the true nature of child labor and what actually we can do about it in different contexts around the world. "Significant debate has taken place among academics to culturally understand the concept of children's presence at workplace. International conventions on child labor have also been analyzed from this perspective. Some academics have suggested that the formulation of these conventions has primarily been dominated by western understanding of children and their roles." (Rehman et al., 2012). Child

labor in the current world is projected as a function of the family poverty and lack of facilities for education and less awareness. Some argue that it is not proper to label child labor as the scourge of poverty alone. Toor (2001) argues that it is “impossible to understand and even address the child labor problem without placing it against the back drop of the dynamics of the current neoliberal international political economic system. She concludes by arguing that the only way in which the issue of social and labor rights can be once more given precedence in an increasingly socially disembodied world economy is through political engagement with the forces of globalization: the World Bank, the International Monetary Fund, and the World Trade Organization. (Toor, 2001).

Rehman et al. (2012) concludes his research by saying although most of the children from poor households go into child labor but not all poor parents are inclined to sending their children in work. Many a times well off families put their children to work in business or agricultural activities, for them to learn from early age the strings. So to purely place economics at the core of the problem, is not fair understanding the interplay of the culture and socioeconomic forces gives a new perspective to the overall phenomenon (Rehman et al., 2012).

Virtually, poverty is the main factor, which stimulates the children to work. Low household resources and income demand children's contribution in the income of family. The socioeconomic backgrounds of the children are victimizing them. There is an intolerable economic pressure exerted on the parents that forces them to make their children work. These children have no substitute and choice except to surrender to their parent's authority. The earning level and employment status of their parents are very dismal especially mother's employment status (Hussain, 2017).

Consequently, child labor eradicating policies must need to address a wide range of principal factors that are directly contributing towards the upsurge or decline in the incidence of child labor, such as employment opportunities, poverty, social progress and access to education (Baland & Robinson, 2000; Muntaner et al., 2010; Fors, 2012; Thompson, 1943).

Social progress also affects child labor which refers to the ability of a society to efficiently fulfill the basic human needs of its citizens by establishing essential opportunities and facilities that allow the citizens to improve and endure the quality of their lives through the realization and accomplishing their full potential (Porter et al., 2013). It is measured by Social Progress Index (SPI) by Porter et al. (2013). It is a complex problem and its roots can be traced back to the cultural, social and economic structures and traditions around the world (Titmus, 1957). Unemployment basically denotes the extent of the labor force that has no work but available for and seeking employment. Poverty is measured in the form of poverty headcount ratio, which at present is at \$1.90 a day and it is currently being the international poverty line at 2011 international prices. It represents the proportion of the population which is living on less than \$1.90 a day and the people who are living below this poverty line are considered to be in extreme poverty (World Bank, 2015). The literature analyzed here leads us to the development and testing of our three following hypothesis which are related to the Impact of Poverty, Social Progress, education and unemployment in the society and whether it impacts the child labor situation of a society or not.

H1: Poverty, unemployment and social progress impacts child labor.

H2: Incidence of child labor in relation to poverty is mediated by of social progress.

H3: Education moderates the relationship between latent variables; social progress and child labor.

2.1 Theoretical Framework

The following frameworks are developed on the basis of hypotheses.

3. Method

After the development of the theoretical framework and hypotheses, methodology used to test the key questions and above mentioned hypotheses. Methodology is being discussed in this section. We conducted our research under the positivist paradigm by using the data obtained from secondary sources for the year 2013. All the analysis is performed through SPSS version 21.0. The mediation is checked

through the PROCESS macro by Andrew F. Hayes. While the moderation is tested through AMOS.

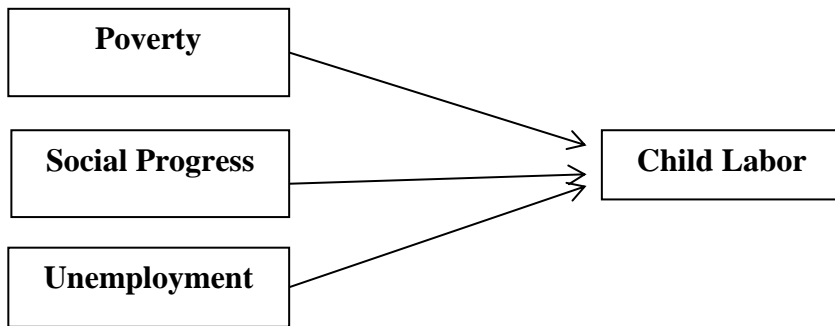


Figure 1. Theoretical Framework

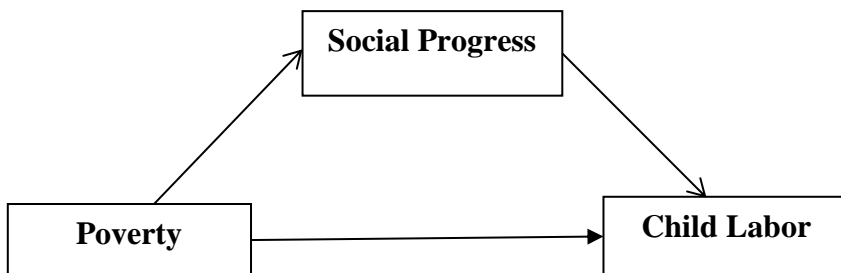


Figure 2. Mediation Framework

4. Data Analysis

The regression analysis is used to check the relationship among dependent variable (Child Labor) and independent variables (poverty, unemployment and SPI), namely “General Linear Multiple Regression”. The data for both unemployment and poverty is taken from the database of World Bank. The Data for SPI is taken from Social Progress Index report, 2014. The data is taken for 30 countries. The countries names are shown in appendix.

5. Results and Discussion

Table 1

Regression Assumptions and Analysis

Shapiro-Wilk Test of Normality

Unstandardized Residual	Statistic	df	Sig.
	.961	30	.322

* $p < .05$

Table 1a

Linearity and Autocorrelation of data

Model	R	R ²	Std. Error	Durbin-Watson
1	.672 ^a	.452	8.44042	2.204

a. Predictors: (Constant), SPI, unemployment, poverty

b. Dependent Variable: CL

Table 1b

Multicollinearity of data

Model	Collinearity Statistics (VIF)
Poverty	2.055
Unemployment	1.028
SPI	2.033

a. Dependent Variable: CL

Table 1c
Heteroskedasticity of data

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.000	3	.000	.000	1.000
Residual	1852.257	26	71.241		
Total	1852.257	29			

a. Dependent Variable: Unstandardized Residual

b. Predictors: (Constant), SPI, unemployment, poverty

4.1 Verification of Normality assumption

The normality assumptions are verified through both methods; numerically as well as graphically. Numerically, a Shapiro-Wilk test value is used to verify normality. The Shapiro-Wilk test value is taken as p-value and then compared to alpha (α) value in order to check the normality of data. Moreover, the data is adjusted for normality. Graphically, normality is determined with the help of Normal Q-Q Plot of unstandardized residual. The value of Shapiro-Wilk test is given in table 1, which corresponds to p-value (.322) $>$ α value (0.05). The Null Hypothesis –Ho– is accepted which depicts that the data is normal, which means there is symmetry in the data and there is no unusual outcome (outliers). The normality is further verified graphically with the help of Normal Q-Q plot of unstandardized residual. The Normal Q-Q plot of unstandardized residual also depicts that almost all data point are on the line or near to the diagonal line and which also verify the normality of data.

Table 1d
Effects of SPI, Poverty and Unemployment on Child Labor

Model	Un-standardized Coefficients			Standardized Coefficients			Model Summary (ANOVA)			
	B	Std. Error	Beta	T	Sig.	R ²	Adj. R ²	F	Sig.	
(Constant)	35.05	14.419		2.430	.022					
SPI	-.379	.214	-.367	-1.771	.088	.672	.452	7.155	.001	
Poverty	.114	.075	.317	1.523	.140					
Unemployed	-.680	.387	-.259	-1.759	.090					

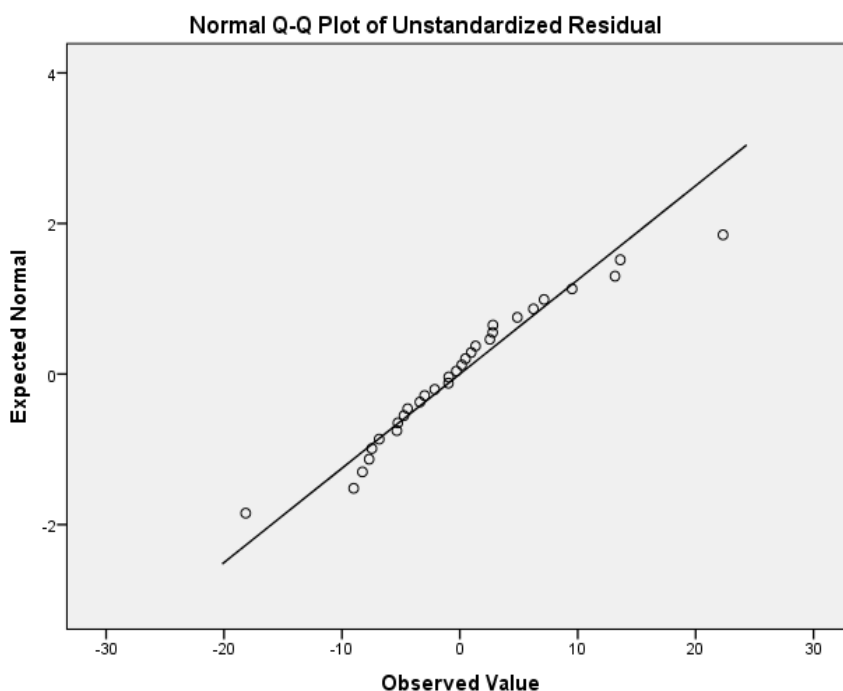


Figure 3. Normality Verification

4.2 Verification of Linearity assumption

The linearity assumption is verified with the help of R^2 . The value of R^2 should be in the limit (0 to 1). The data values in table 1a show that our data is linear within the limit values of R^2 .

The value of R^2 is '.452', as its value lies between 0-1, so it shows that the linearity does exist among dependent and independent variables. R^2 also helps to identify the power and efficiency of the analysis; that how much dependent variable depends on independent variables or how much dependent variable is being explained by independent variables. Thus, the value of R^2 is '.452' which demonstrates that the analysis of dependence has moderate power and efficiency. Therefore, it can be inferred that it is a linear and moderate model.

4.3 Verification of Multicollinearity assumption

The multicollinearity assumption is to ascertain the dependence among independent variables which could cause the value of R^2 to be inflated and the severity of the dependence among independent variables is verified with the help of *Variance Inflation Factor* (VIF). The value of VIF should be in the limit (0 to 10) in order to ignore the multicollinearity. The data values in Table 1b show that our data has little multicollinearity as the value of VIF is in the appropriate limit, thus multicollinearity does exist but it is ignorable.

4.4 Verification of Autocorrelation assumption

The autocorrelation assumption signifies the correlation among different observations and this correlation might inflate the value of other observations and it is verified through the value of Durbin-Watson test. The value of Durbin-Watson should be in the limit (1.7 to 2.3) in order to check the acceptable level of autocorrelation. The data value of Durbin-Watson is '2.204' in Table 1a, which shows that the autocorrelation in the data is within the limit values of Durbin-Watson. Which depicts that autocorrelation does exist but it is ignorable.

4.5 Verification of Heteroskedasticity assumption

The heteroskedasticity assumption implies that the inter-observation variance difference must be same which means that there must be homogeneity of variance among observations. The heteroskedasticity is verified through Breusch Pagan Test, the following hypotheses were made;

H0: Data is Homoskedastic

H1: Data is not Homoskedastic

The significance value of data is checked from ANOVA table, which is shown in Table 1c. The significance value of ANOVA table corresponds to p-value and p-value $(1.000) > \alpha$ value (0.05), therefore H_0 is accepted which depicts that the data is homoscedastic.

4.6 Regression Test

The relationship among dependent and independent variables is developed and checked through regression analysis. The model coefficients in Table 1d depicts that the relationship does exist between dependent and independent variables as Beta value is greater than.

- a. The numerical value of dependence between unemployment and SPI with child labor is ‘-.680’ and ‘-.379’ respectively, which depicts an indirect relationship exists between these variables. The dependence between poverty and child labor is ‘.114’ and a direct relationship exists between these variables which show that with an upward change in independent variable, there would be an upward change in dependent variable as well and vice versa.
- b. The relative importance of each independent variable could be analyzed through ‘Standardized Beta Coefficient’ which demonstrates the explain ability power of each predictor as compared to the other. Among all of the three independent variables, SPI is more sensitive and powerful independent variable with a value of ‘-.367’. The poverty is the second powerful independent variable with a value of ‘.317’ while the unemployment is the least powerful variable with a value of ‘.259’.

4.7 Overall significance of Model

The overall significance of the model is checked by ANOVA table which is given in Table 1d. The p-value of ANOVA is ‘.001’, which is less than α value (0.05), which portrays that child labor does depend upon poverty, unemployment and SPI. The significance value of ANOVA also confirms that results are generalizable to the population as a whole and these results are authentic and can be repeatable and reproducible.

4.8 Use of Regression Model for the prediction and Forecasting

From the above regression model, the following equation is developed;

Child Labor = 35.045 -.680 unemployment -.379 SPI +.114 poverty + 15.095 (Residual)

The outcome of Regression analysis is a linear equation which is used for forecasting the trend of child labor depending upon independent variables (poverty, SPI and unemployment) for the prediction of future child labor trend pertaining how much each variable is contributing in overall model and in which direction.

5. Mediation effect of Social Progress Index

The mediation is checked through the PROCESS by Andrew F. Hayes.

5.1 Mediating effect of SPI

In the mediation model, poverty act as independent variable, child labor is dependent variable while social progress index is used as mediator. The sample size was 30 countries. The results are shown in Table 2.

The first part of the output in Table 2 shows the total effect information from the regression with the independent variable (poverty) predicting the dependent variable (CL). The model summary shows that R^2 is .301, this depicts that poverty explains almost 30% variance in CL. The $F=12.078$ and it is statistically significant. As, $b=.197$ and $p=.002$, it means that poverty is statistically significantly predicting CL.

The second part of the output in Table 2a shows the information from the regression with the independent variable (Poverty) predicting the mediating variable (SPI). The model summary shows that the multiple correlation coefficient (R) is .707 and R^2 is .500, this depict that poverty explains almost 50 % variance in SPI. The F statistic is statistically significant. It means that poverty is statistically significantly predicting SPI with $b=-.245$ and $p=.000$.

Afterwards, the independent variable (poverty) and the mediating variable (SPI) are predicting the CL. The model summary in Table 2b shows that the R^2 is .387, this depicts that the combination of poverty and SPI explain almost 39 % variance in CL. The model information shows that SPI is statistically significantly predicting CL as $b=-.428$ and $p=.042$.

Table 2
Mediation effect of Social Progress Index

Model Summary(Poverty predicting CL)							Model Coefficients				
	R	R ²	F	Df1	Df2	p		Coeff.	SE	t	p
Outcome variable											
Child Labor	.549	.301	12.078	1	28	.002	Constant	5.739	2.785	2.061	.049
							Poverty	.197	.057	3.475	.002

Table 2(a)

Model Summary (Poverty predicting SPI)							Model Coefficients				
Outcome variable	R	R ²	F	Df1	Df2	p	Coeff.	SE	t	p	
SPI	.707	.500	56.622	1	28	.000	Constant	6.918	2.281	9.331	.000
							Poverty	.245	.046	5.288	.000

Table 2(b)

Model Summary (Poverty and SPI predicting CL)						Model Coefficients			
Outcome Variable	R	R ²	F	Df1	Df2	p	Coeff.	SE	t
Child Labor	.622	.387	8.526	2	27	.001	Constant	34.351	14.962
							SPI	-.428	.220
							Poverty	.092	.076
									2.296
									.030
									.042
									.239

Table 2(c)

Mediating Effect through SPI				
Indirect effect(s) through: SPI	Effect	SE	LLCI	ULCI
	.105	.059	.012	.242

Table 2(d)
Statistical Significance of the Indirect Effect

	Effect	SE	LLCI	ULCI
Preacher and Kelley (2011) Kappa-squared	.248	.111	.038	.457
	Effect	SE	Z	p
Normal Theory Tests For Indirect Effect	.105	.058	1.796	.043

5.2 Confirmation of mediating effect

The mediation effect is being confirmed by the indirect effect through SPI which is given in Table 2c. As it could be seen that zero does not lie in the limits of LLCI and ULCI, demonstrating a mediating effect of SPI on the relationship between poverty and CL.

5.3 Statistical significance of the indirect effect

The statistical significance of the indirect effect is checked through Preacher and Kelley (2011) Kappa-squared and its values range from 0 to 1 and could be interpreted similarly to R^2 . For the indirect effect of SPI, the value of Kappa-squared is '.248' which is shown in Table 2d; it means that there is a slight moderate effect size. The significance of Kappa-squared is checked through Normal theory tests for indirect effect that is also given in Table 2d, which depicts that the indirect effect is statistically significant.

5.4 Moderation effect of Education in AMOS

The analysis of the moderation effects for a particular model with the help of latent constructs is far more complicated as compared to observed variables. Therefore, typical modeling procedure in which interaction terms are used is not applicable with latent constructs because it might cause standard errors distortion as well as convergence problems in the model. Consequently, it would result in misfit model and stops the procedure of analysis. An alternative approach which is used for this purpose is the Multi-Group CFA to assess the moderating effects of a variable in the model. The path of interest on which the moderating effects are to be assessed, is generally constrained with parameter =1 and called a constrained model. Then two models would be assessed separately; one is the unconstrained model (without parameter) and the other is the constrained model (with parameter).

5.5 Moderation Model

For this particular analysis, the child labor (CL) is dependent variable and considered as a latent variable made up of unemployment, poverty and child literacy. While social progress imperative (SPI) is independent variable made up of basic human needs, foundations of wellbeing and opportunity. Education in terms of adult literacy rate is considered to moderate the relationship between dependent and

independent variable. So, in order to check out the moderating effect of education on the relationship between SPI and CL, the following model is developed.

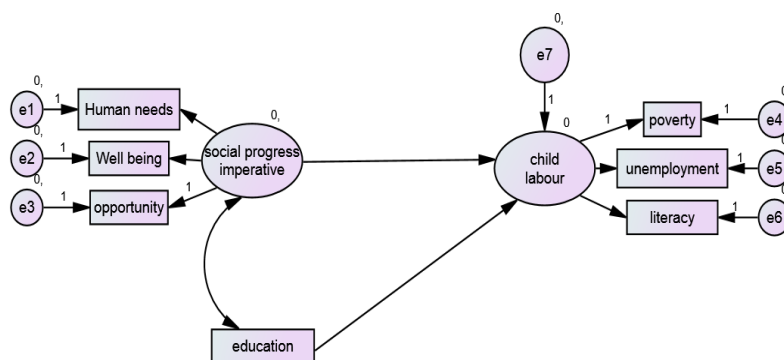


Figure 4. Structural Model

5.6 Model summary

The model summary is provided to ascertain the identification status of the model. The number of parameters to be estimated represents the corresponding population variances and co-variances while the degree of freedom represents the amount by which the number of sample moments exceeds the number of parameters to be estimated. This ultimately signifies either the model is just-identified, over-identified or under-identified.

In this particular analysis the established model is an over-identified model. In the Constrained model, minimum model fitness was achieved at a '.000' probability level, having a Chi-square value of '822.531' at '81' degrees of freedom. While in case of unconstrained model, minimum was achieved at a '.001' probability level, having a Chi-square value of '34.041' at '13' degrees of freedom.

5.7 Goodness-of-Fit Statistics

The determination of goodness-of-fit between the sample data and hypothesized model is the primary task of the analysis. Table 3 displays the fit statistics for both of the models (constrained and unconstrained).

- The Chi-square basically tests the null hypothesis that the over-identified model fits the data as well as does a just-identified model. The value of chi-square is a basic measure to check out the extent of incompatibility of sample data with the hypothesis and it basically depicts that the difference between the implied covariance and sample covariance. A zero value of chi-square typically points out no departure from the null hypothesis. Furthermore, the more the difference between the two covariance, the bigger the value of chi-square will be. The Normed Fit Index (NFI) and Comparative Fit Index (CFI) depict the difference between the default and independence models' chi-squares divided by the independence model's chi-square. For a good fit the value of NFI must be ≥ 0.95 and ≤ 1.00 . While the values of CFI for good fit range from $\geq 0.97 \leq 1.00$. The Root Mean Square Error of Approximation (RMSEA) estimates the lack of fit as compared to the saturated model. The value of RMSEA $\leq .05$ shows a good fit while value of $\leq .08$ signifies moderate fit. The goodness of fit index (GFI) corresponds to the extent to which the variance in the sample variance-covariance matrix is accounted for by the model. For a good fit the value of GFI must exceed 0.9. While Incremental Fit Index (IFI) is analogous to R^2 and thus depicts the strength of the model. So, a value closer to one indicates the best possible model. Root Mean Square Residual (RMR) illustrates the difference between the observed correlation and the predicted correlation. When RMR is zero, then it shows the exact fit between the observed and predicted correlation. Moreover, smaller value of RMR is preferred.

Table 3
Moderation effect of Education in AMOS (Goodness of Model Fit)

Model Fit criterion	Constrained Model	Unconstrained Model	Fit test Status	Chi-square Difference	Result on Moderation Hypothesis
Chi-square	58.479	34.041	Not fit	24.438	Supported
DF	14	13	-	1	
Chi-square/ df	4.177	2.619	Not fit		
P value	.000	.001	Not fit		
GFI	1.00	1.00	Good fit		
IFI	1.00	1.00	Good fit		
CFI	1.00	1.00	Good fit		
RMSEA	0.331	0.236	Not fit		
NFI	1.00	1.00	Good fit		
RMR	.000	.000	Good fit		

5.8 Significance of moderation test

The significance of moderation test is assessed through the difference in the Chi-Square values of both models which must be greater than the value of Chi-Square with 1 degree of freedom that is 3.84. Therefore, for the above model difference of Chi-Square values is shown in Table 3, the test of moderation is significant as between the constrained and unconstrained model 24.438 (58.479 – 34.041), is greater than 3.84. Therefore, it is concluded that, adult education moderates the causal effects of SPI on promoting CL.

5.9 Significance of Hypotheses

For this particular analysis, there were three hypotheses. Now this section depicts the significance for all three hypotheses.

H1 is tested through multiple regression and the ANOVA table's corresponding p-value is '.001' which is less than α value (0.05) that indicates the rejection of null hypothesis and therefore alternate hypothesis H1 is accepted which illustrates that a Child Labor does depend upon poverty, unemployment and social progress index.

H2 is verified through the PROCESS and the mediation effect is being confirmed by the indirect effect through SPI. As zero does not lie in the limits of LLCI and ULCI, demonstrating a mediating effect of SPI on the relationship between poverty and CL. Moreover, for the indirect effect of SPI, the value of Kappa-squared is '.248'; it means that there is a slight moderate effect of SPI on the relationship between poverty and CL. Hence H2 is also accepted.

H3 is verified through AMOS and it is estimated that the test of moderation is significant as the difference in Chi-Square value between the constrained and unconstrained model 24.438 (58.479 – 34.041), is greater than 3.84. Therefore, H3 is accepted and it can be inferred that the adult education does moderate the causal effects of SPI on promoting CL.

6. Implications and Conclusion

This paper aimed to analyze the impact of poverty, unemployment and socialization on the child labor based on data taken from world organization databases from 30 countries to establish a correlation among these independent and dependent variables and to ascertain

the relational impact of proposed variables on each other in different countries of world. The literature review of available resources and analysis of data show that there is a moderate effect of social progress on the relationship between child labor and poverty. The literature review also affirms our conclusion, as there are numerous researches that highlight the significance of society, its progression and the poverty factor, which inadvertently leads to the child labor promotions.

The unemployment factor also plays an important role in this scenario, as it also affects the manner in which the unemployed adults are forced to meet the illegal demand of the industries or occupations that require child labor. Policy makers must be careful in creating policies that will help the children and not indirectly harm their future, it is complex mixture of factors and we have only looked at few. Further research must be conducted with what are the reasons of child labor in different cultures? What are the main factors that affect the poverty and child labor correlation? What socio-economic reforms can policy makers make that can start the diminishing of child labor from their societies?

Eliminating child labor from within our societies may not be easy as the definition of the concept is relative and regionally different. Still concerted effort must be made in all spheres from international to regional to national domains to further curtail the menace where it exists in its true form. Can we do it, is a million-dollar question. However, this paper exercise is limited in scope as it only takes the data for few countries and look at poverty, socialization index and unemployment status of the countries to see how economic growth affect the child labor. How do the above mentioned factors play a role in the relationship if it exists between the economic growth and child labor. These limitations assist the need for further research.

References

- Baland, J.M. & Robinson, J.A. (2000). Is child labor inefficient? *Journal of Political Economy*, 108(4), 663–679. doi: <https://doi.org/10.1086/316097>
- Basu, K. & Tzannatos, Z. (2003). The global child labor problem: What do we know and what can we do? *The World Bank Economic Review*, 17(2), 147–173. doi: <https://doi.org/10.1093/wber/lhg021>
- Basu, K. & Van, P. H. (1998). The economics of child labor. *The American Economic Review*, 88(3), 412–427.
- Basu, K. (2001). International labor standards and child labor. In *Globalization, Institutions and Social Cohesion* (pp. 115–123). Springer, Berlin, Heidelberg.
- Beegle, K., Dehejia, R., & Gatti, R. (2009). Why should we care about child labor? The education, labor market, and health consequences of child labor. *Journal of Human Resources*, 44(4), 871–889. doi: 10.3368/jhr.44.4.871
- Bradshaw, J. (2014). Overview: Social policies and child well-being. In A. Ben-Arieh, F. Casas, I. Frønes & J. E. Korbin (Eds.), *Handbook of child well-being: Theories, methods and policies in global perspective* (pp. 2921–2943). Dordrecht: Springer Netherlands. doi: https://doi.org/10.1007/978-90-481-9063-8_117
- Caspi, A. (2000). The child is father of the man: personality continuities from childhood to adulthood. *Journal of Personality and Social Psychology*, 78(1), 158–172.
- Edmonds, E. V. (2007). Child labor. *Handbook of development economics*, 4, 3607–3709. doi: [https://doi.org/10.1016/S1573-4471\(07\)04057-0](https://doi.org/10.1016/S1573-4471(07)04057-0)
- Emerson, P.M. & Souza, A.P. (2007). Child labor, school attendance, and intrahousehold gender bias in Brazil. *The World Bank Economic Review*, 21(2), 301–316. doi: <https://doi.org/10.1093/wber/lhm001>
- Engle, P. L. & Black, M. M. (2008). The effect of poverty on child development and educational outcomes. *Annals of the New York Academy of Sciences*, 1136(1), 243–256. doi: 10.1196/annals.1425.023
- Fors, H.C. (2012). Child labour: A review of recent theory and evidence with policy implications. *Journal of Economic Surveys*, 26(4), 570–593. doi: 10.1111/j.1467-6419.2010.00663.x

- Harper, C., Marcus, R. & Moore, K. (2003). Enduring poverty and the conditions of childhood: lifecourse and intergenerational poverty transmissions. *World Development*, 31(3), 535–554. doi: [https://doi.org/10.1016/S0305-750X\(03\)00010-X](https://doi.org/10.1016/S0305-750X(03)00010-X)
- Humphries, J. (2013). Childhood and child labour in the British industrial revolution1. *The Economic History Review*, 66(2), 395–418. Doi: 10.1111/j.1468-0289.2012.00651.x
- Hussain, M., & Saud, A. (2017). Socio-economic determinants of working children: Evidence from capital territory of islamabad, Pakistan. *Pakistan Administrative Review*, 1(2), 145–158.
- International Labour Organization, (2004). *Child labor: A textbook for university students*. Retrieved from https://resourcecentre.savethechildren.net/node/8335/pdf/wcms_067258.pdf
- International Labour Organization, (2013). *World report on child labour economic vulnerability, social protection and the fight against child labour*. Geneva. Retrieved from http://www.ilo.org/ipecc/Informationr sources/WCMS_178184/lang-en/index.htm
- Khakshour, A., Ajilian Abbasi, M., Seyed, S.J., Saeidi, M. & Khodae, G.H. (2015). Child labor facts in the worldwide: A review article. *International Journal of Pediatrics*, 3(1.2), 467–473.
- Kielland, A. & Tovo, M.C. (2006). *Children at work: Child labor practices in Africa*. Boulder, CO: Lynne Rienner Publishers.
- Lancaster, G. & Ray, R. (2004, August). Does child labour affect school attendance and school performance? Multi country evidence on SIMPOC data. In *Econometric Society 2004 Australasian Meetings* (No. 68). Econometric Society.
- Lyons-Barrett, M. (2005). Child labor in the early sugar beet industry in the great plains, 1890-1920. *Great Plains Quarterly*, 25(1), 29–38.
- Mayer, J. (2004). Industrialization in developing countries: Some evidence from a new economic geography perspective (No. 174). Paper presented at *United Nations Conference on Trade and Development*. Retrieved from <https://ideas.repec.org/p/unc/dispap/174.html>

- Muntaner, C., Solar, O., Vanroelen, C., Martínez, J. M., Vergara, M., Santana, V., Castedo, A., Kim, I. H., Benach, J. & Network, EMCONET. (2010). Unemployment, informal work, precarious employment, child labor, slavery, and health inequalities: Pathways and mechanisms. *International Journal of Health Services*, 40(2), 281–295. doi: <https://doi.org/10.2190/HS.40.2.h>
- Musterd, S. & Andersson, R. (2006). Employment, social mobility and neighbourhood effects: The case of Sweden. *International Journal of Urban and Regional Research*, 30(1), 120–140. doi: 10.1111/j.1468-2427.2006.00640.x
- Porter, M.E., Stern, S. & Loria, R.A. (2013). *Social progress index 2013*. Washington, DC: Social Progress Imperative.
- Preacher, K. J., & Kelley, K. (2011). Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods*, 16(2), 93–115.
- Ray, R., & Lancaster, G. (2004). *The impact of children's work on schooling: Multicountry evidence based on SIMPOC data (Scholarly Project)* .In *The impact of children's work on schooling: Multicountry evidence based on SIMPOC data* Retrieved from <http://repec.org/esAUSM04/up.15362.1076562558.pdf>.
- Rehman, H., & Chaudhry, M. S. (2012), Cultural and Economic Discourses on Child Labour. *The Pakistan journal of social issues*, 3, 1.
- Sengenberger, W. (2002). *Globalization and social progress: The role and impact of international labor standards*. Bonn, Germany: Friedrich-Ebert-Stiftung.
- Siddiqi, A.F. (2013). Important determinants of child labor: A case study for Lahore. *American Journal of Economics and Sociology*, 72(1), 199–221. doi: 10.1111/j.1536-7150.2012.00871.x
- Thompson, E.T. (1943). Comparative education in colonial areas, with special reference to plantation and mission frontiers. *American Journal of Sociology*, 48(6), 710–721. doi: 10.1086/219268
- Titmuss, R.M. (1957). Industrialization and the family. *Social Service Review*, 31(1), 54–62.

- Toor, S. (2001). Child labor in Pakistan: Coming of age in the new world order. *The Annals of the American Academy of Political and Social Science*, 575(1), 194–224. doi: <https://doi.org/10.1177/000271620157500112>
- Toossi, M. (2015). Labor force projections to 2024: The labor force is growing, but slowly. *Monthly Labor Review*, 138, 1–33.
- United Nations. (1989). Convention on the Rights of the Child. Retrieved from <http://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx> (Accessed 24 September 2016)
- Weiner, M. (1991). *The child and the state in India: Child labor and education policy in comparative perspective*. New Jersey, U.S: Princeton University Press.
- Weston, B.H. (Ed.). (2005). *Child labor and human rights: Making children matter*. Colorado, U.S: Lynne Rienner.

Appendix**Name of Countries**

Argentina	Côte d'Ivoire	Nepal
Belarus	Democratic Congo	Niger
Benin	Ecuador	Panama
Brazil	El Salvador	St Lucia
Cambodia	Gabon	Senegal
Colombia	Guatemala	Tunisia
Congo Republic	Guinea	Turkey
Cape Verde	Haiti	Uganda
Chile	India	Ukraine
Comoros	Mongolia	Vietnam
